



Agilent 1290 Infinity LC Injector HTS/HTC

Make your high throughput
LC/MS analysis more robust



Agilent 1290 Infinity LC Injector HTS/HTC



High capacity LC sample Injection systems - ideal for high-throughput LC/MS analysis

Agilent 1290 Infinity LC Injector HTC



- 50 cm wide
- Up to 12 well plates cooled

Agilent 1290 Infinity LC Injector HTS



- 80 cm wide
- Add up to 24 well plates with cooling

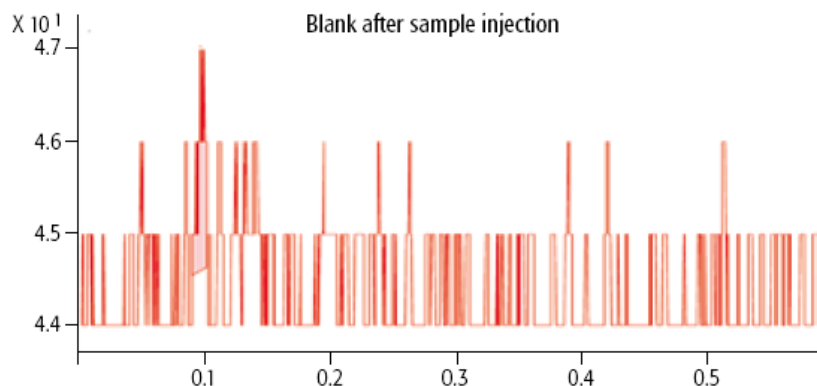
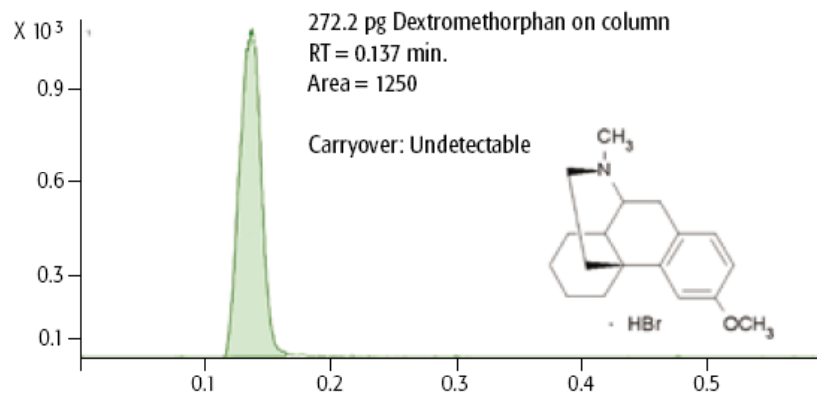
Features & Benefits



- **Robust up to 1200 bar operation** based on proprietary Agilent/Rheodyne designed valve (Agilent exclusive for 2 years)
- **Low carryover** from Dynamic Loading and Washing (DLW) with dual solvent wash for ultra low carryover, typically < 0.004% or 40 ppm
- **Overlapped injection** and washing during the runs for ultra fast cycle times (< 5 s) without compromising carryover
- **15% faster robotics**, based on new electronic design
- **Injection volume up to 100 μ L** with DLW and up to 5 mL* with Active or Fast wash
- **Less than 60 sec cycle time** with fast Dynamic Load & Wash (DLW)
- **Infinitely flexible**, compatible with any Agilent standard LC and UHPLC systems! Extended range of CTC cycles available
- **Connects with all Agilent data systems:** ChemStation, EZChrom and MassHunter
- **Worldwide Agilent support** and services

*Separate hardware required

Performance



Injection of 272.2 pg Dextromethorphan on column; followed by blank injection
No carryover could be detected.

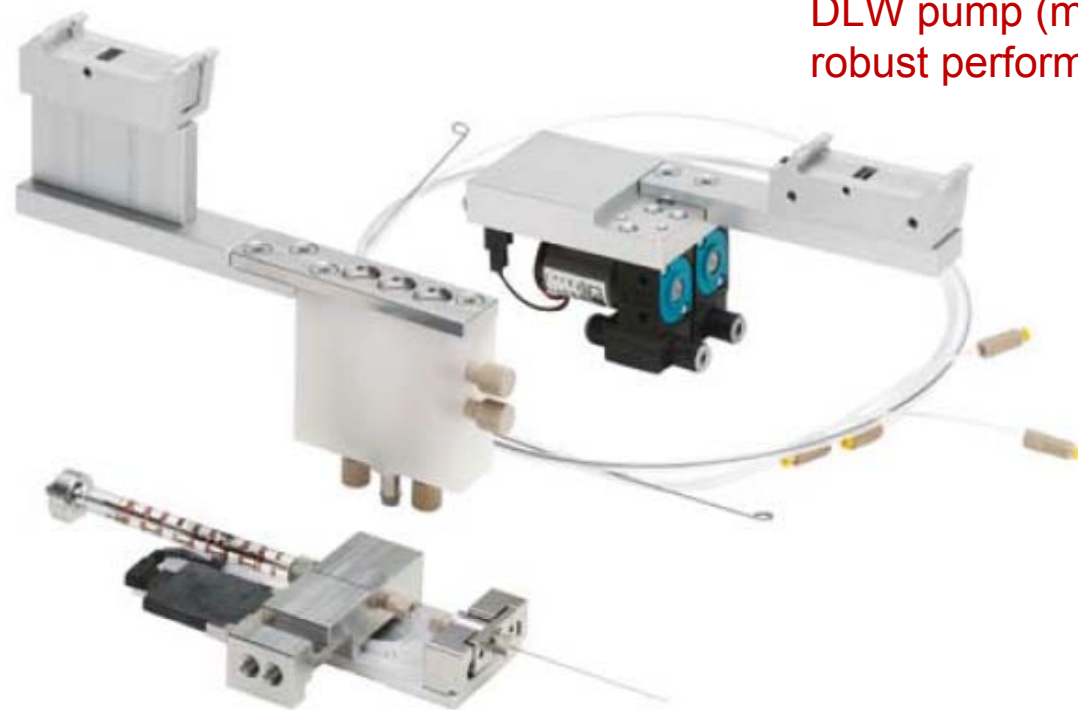
- DLW wash cycle for near-zero carryover
- Less than 60s cycle time achieved with washing
- Reproducibility of < 1% demonstrated

Fast Dynamic Load & Wash (DLW)



DLW wash station

DLW pump (more robust performance)

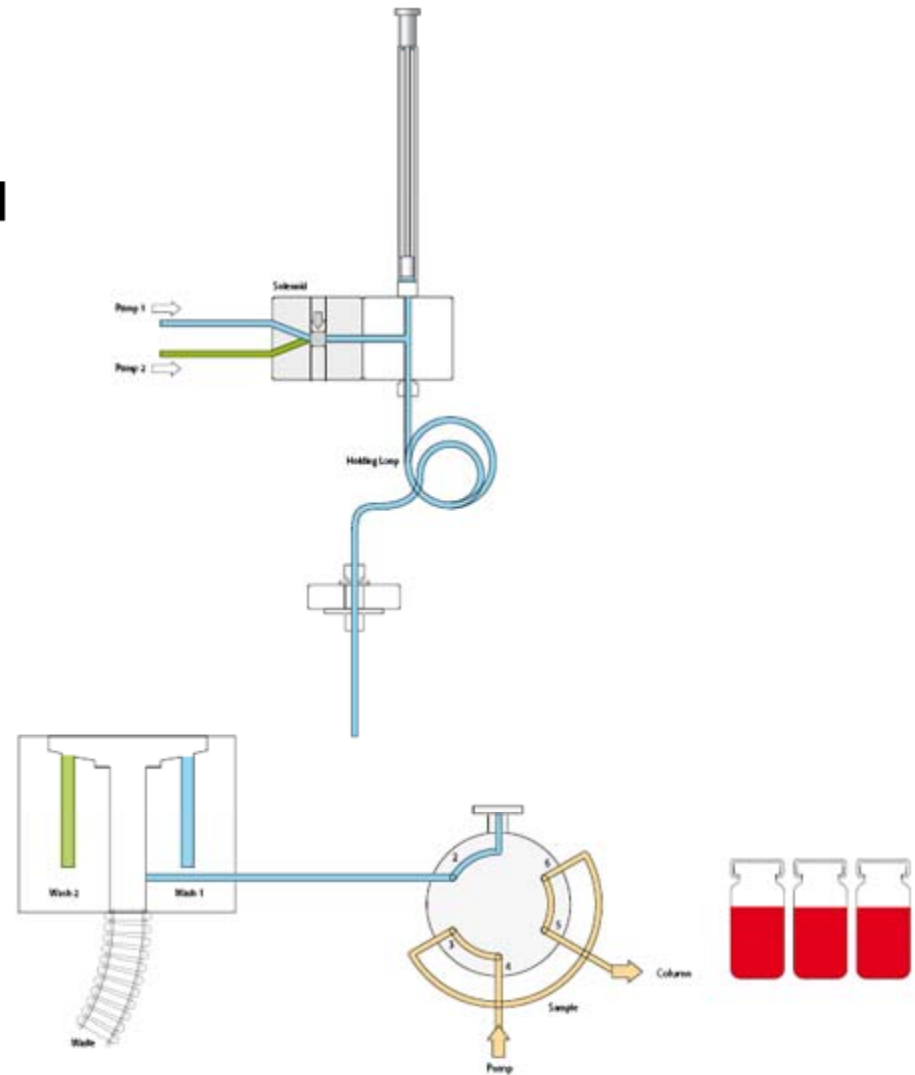
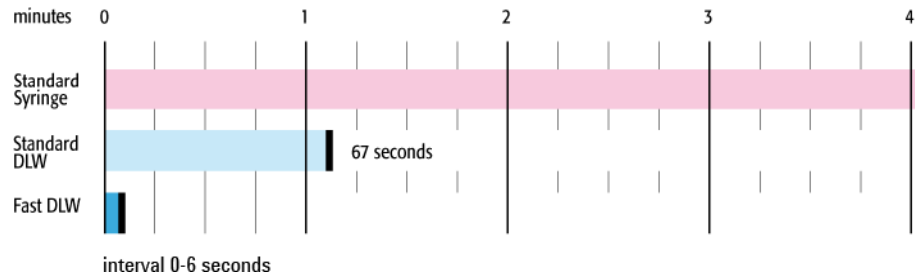


Syringe

Fast Dynamic Load & Wash Cycle Demonstration



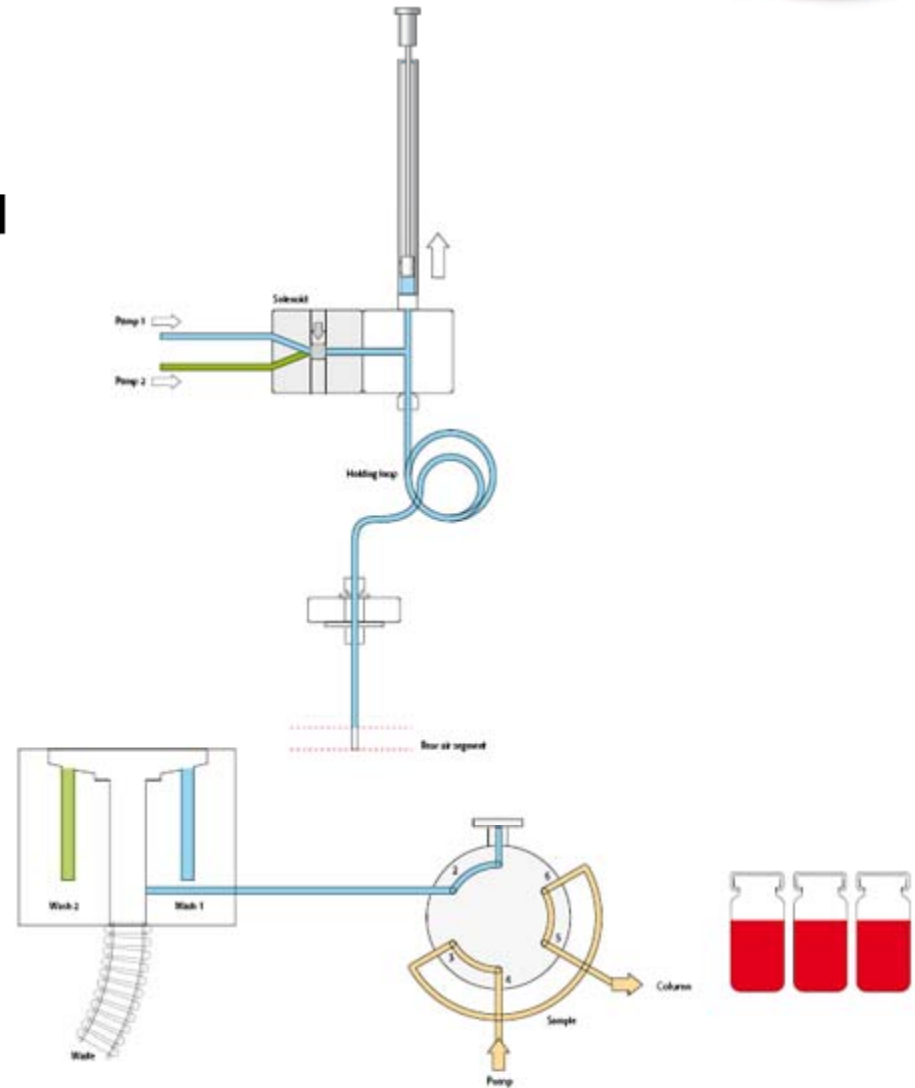
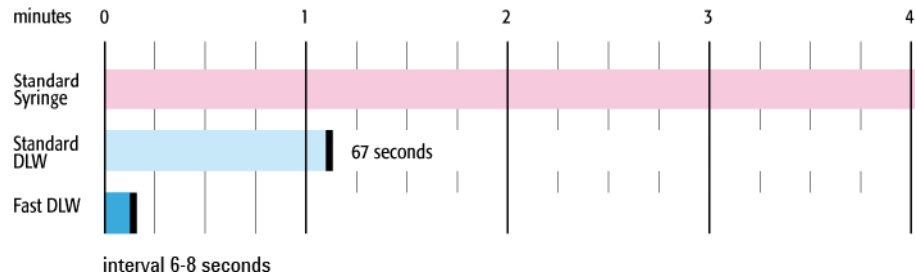
Cycle Start



Fast Dynamic Load & Wash: Step 1



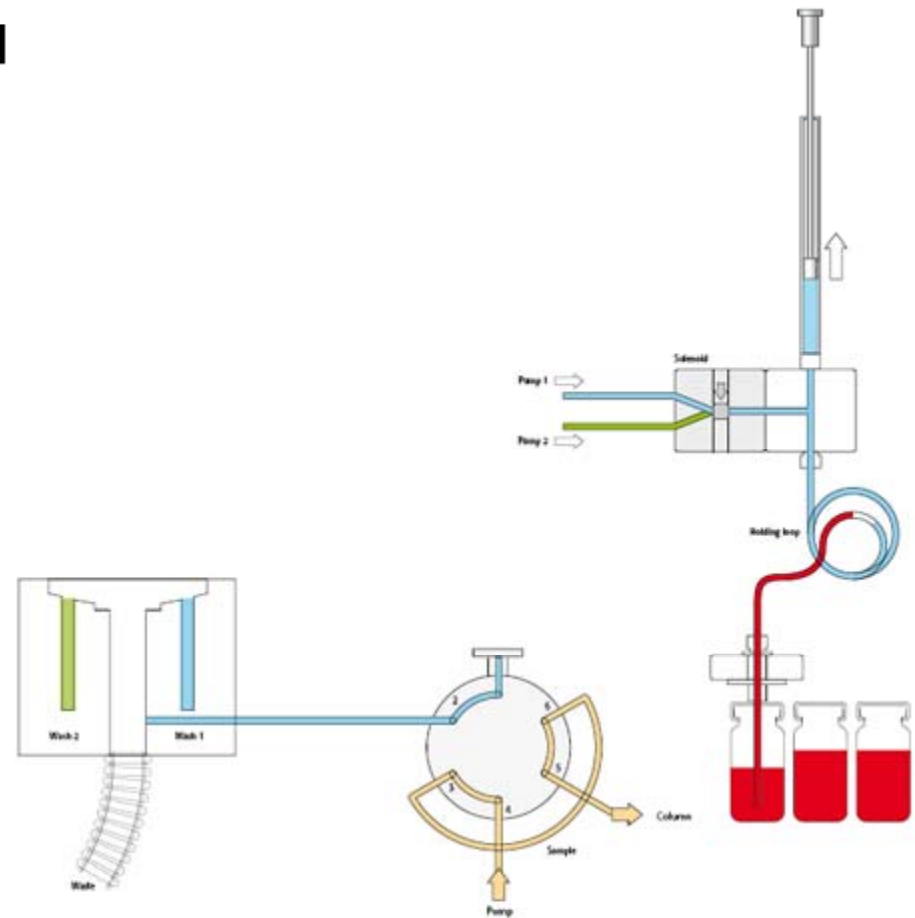
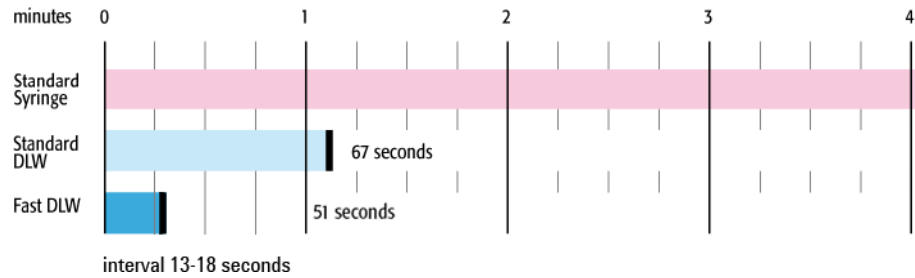
Aspirate rear air segment



Fast Dynamic Load & Wash: Step 2



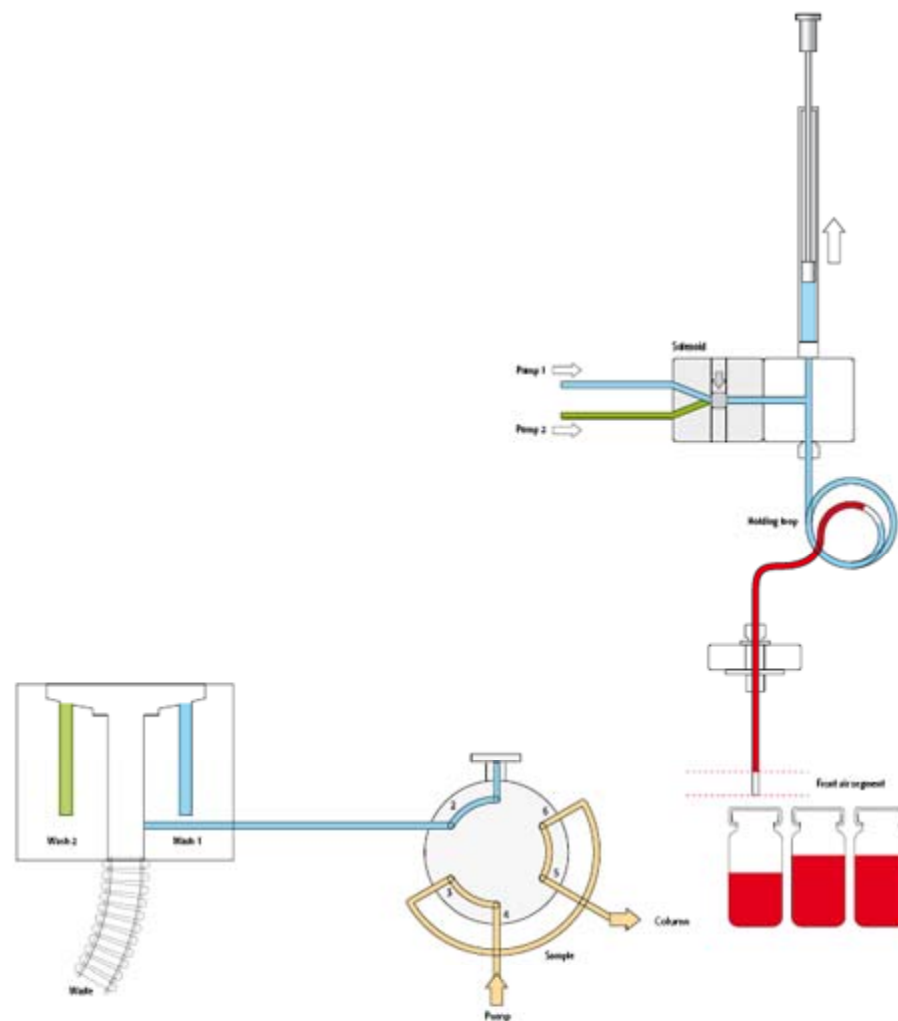
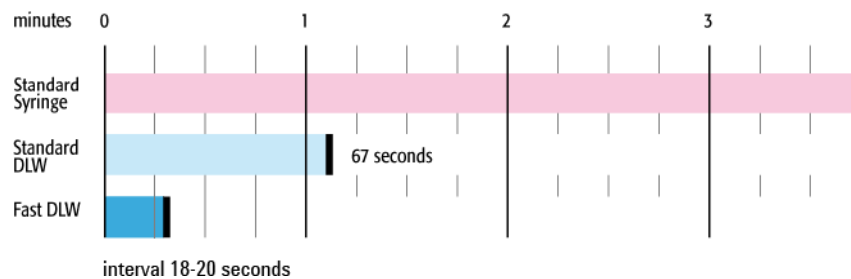
Get sample, aspirate rear, inject and front volume.



Fast Dynamic Load & Wash: Step 3-4



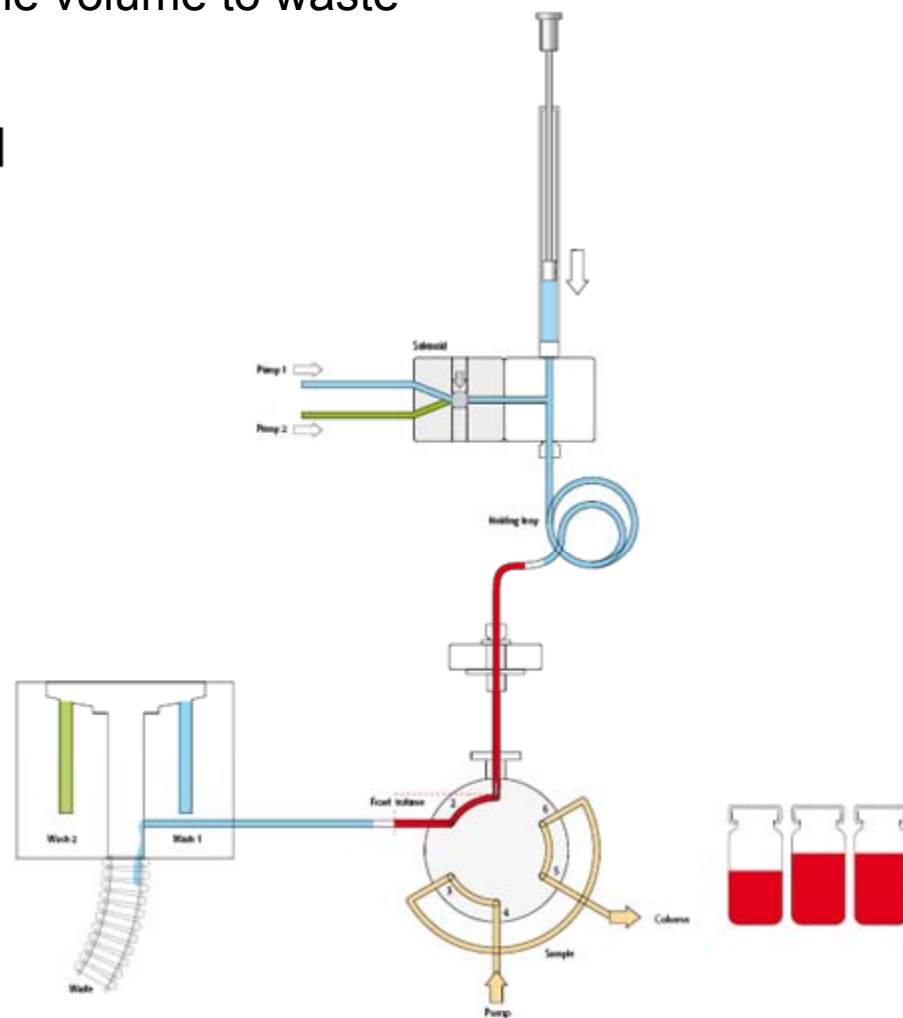
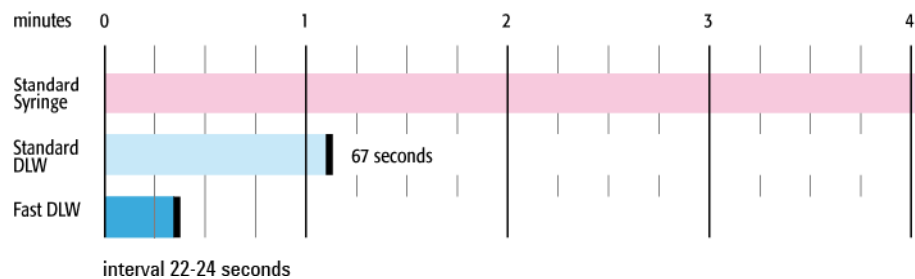
Aspirate front air segment



Fast Dynamic Load & Wash: Step 5-6



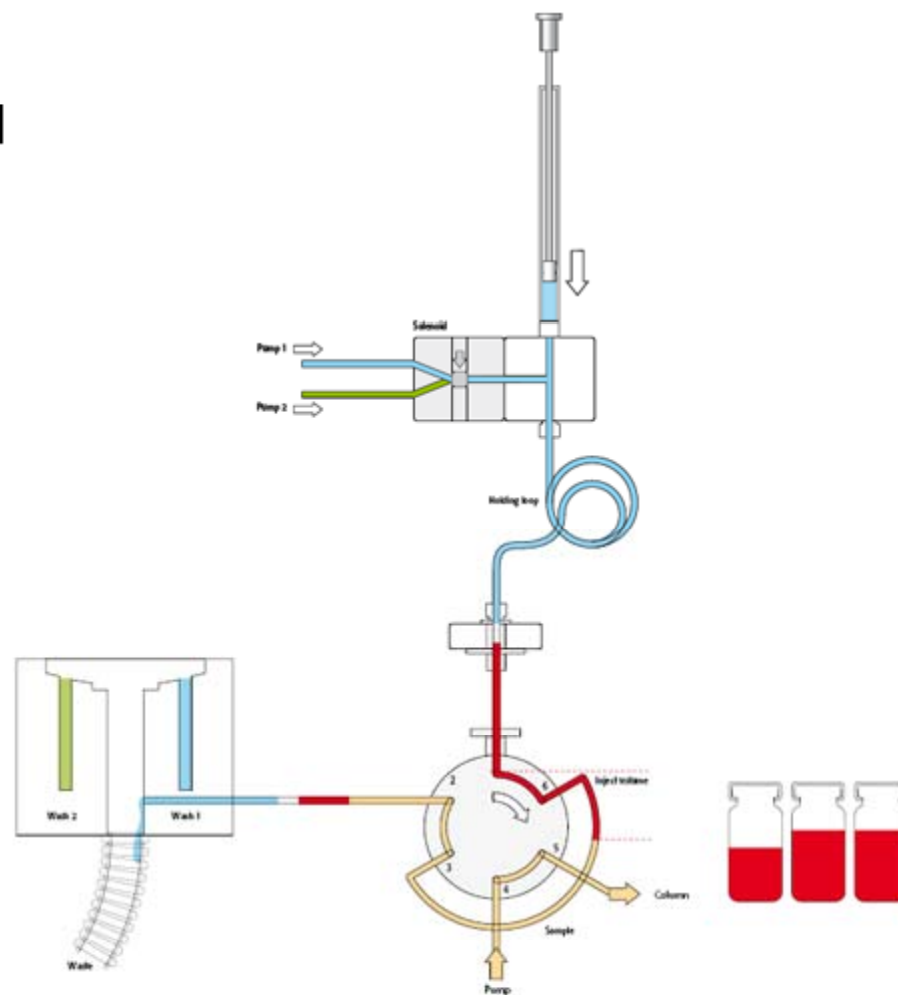
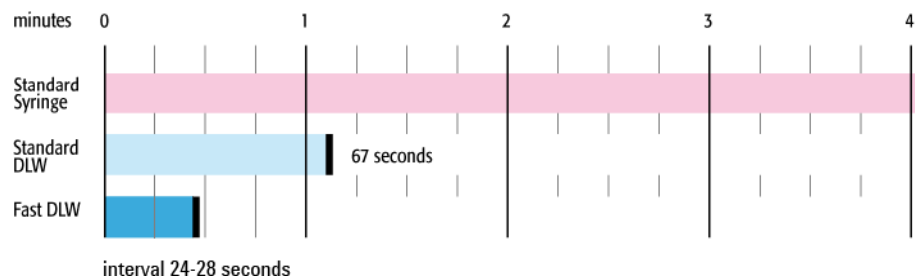
Dispense front air segment and front sample volume to waste



Fast Dynamic Load & Wash: Step 7-8



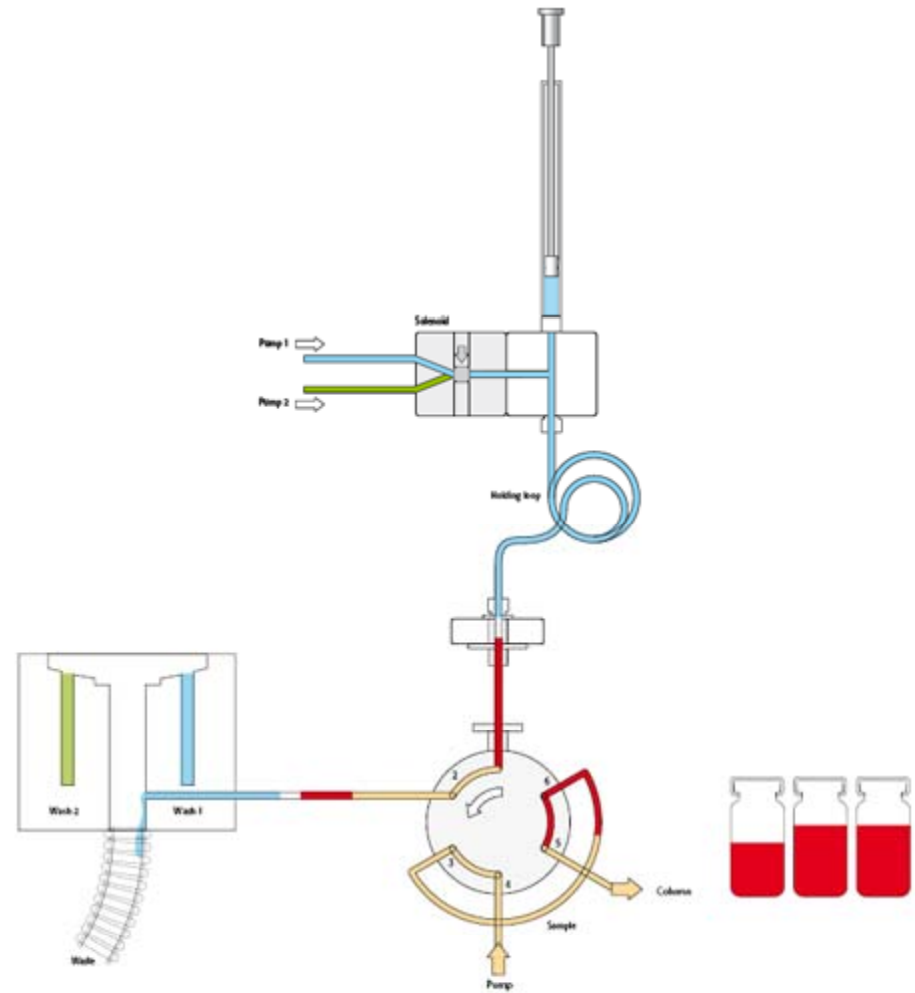
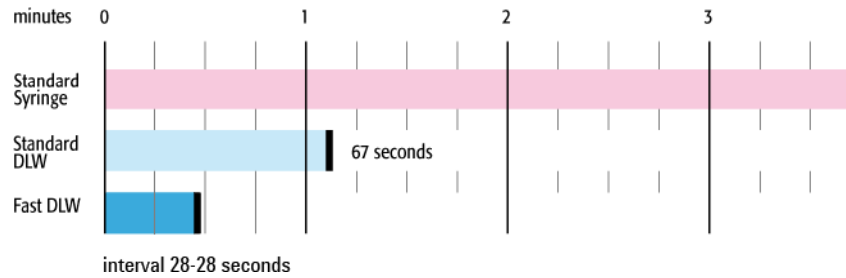
Valve to load position and load inject volume



Fast Dynamic Load & Wash: Step 9



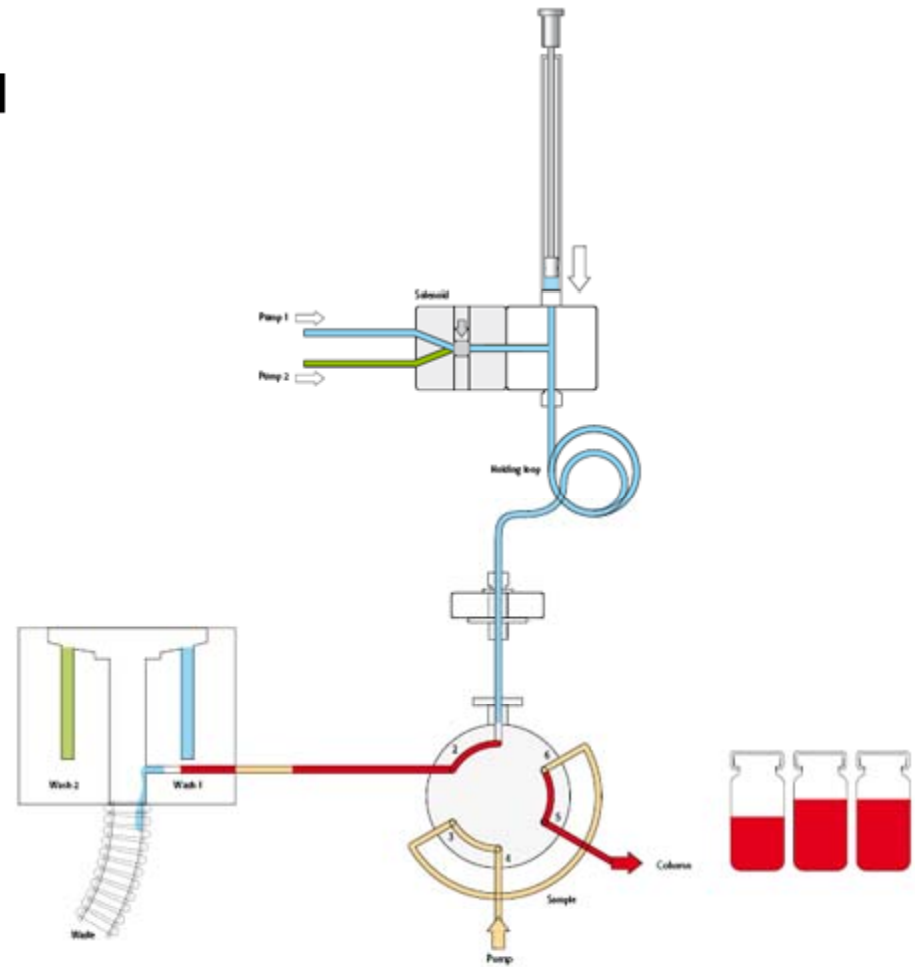
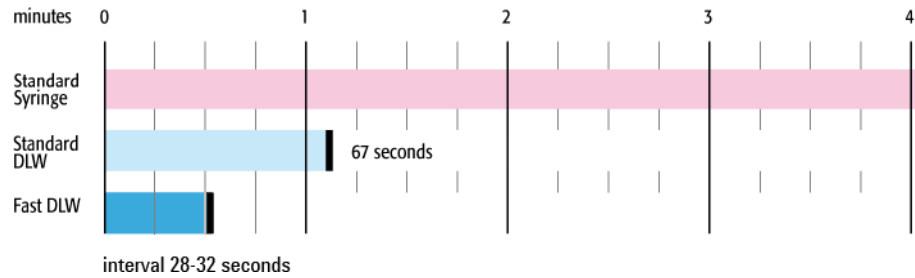
Valve to inject position and start LC run



Fast Dynamic Load & Wash: Step 10



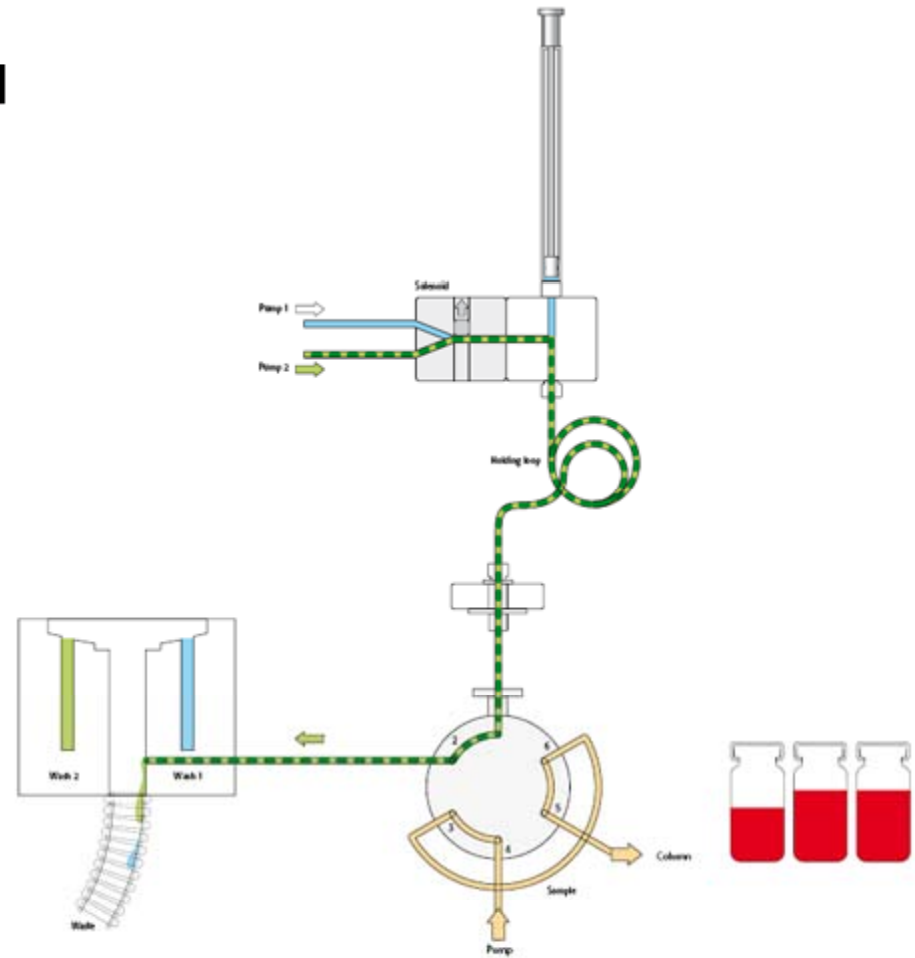
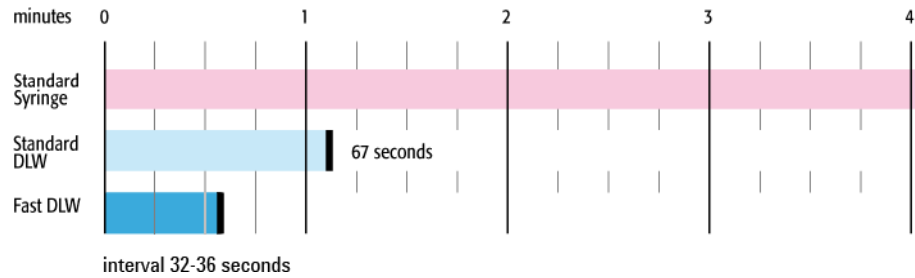
Dispense rear sample and air segment to waste



Fast Dynamic Load & Wash: Step 11-12



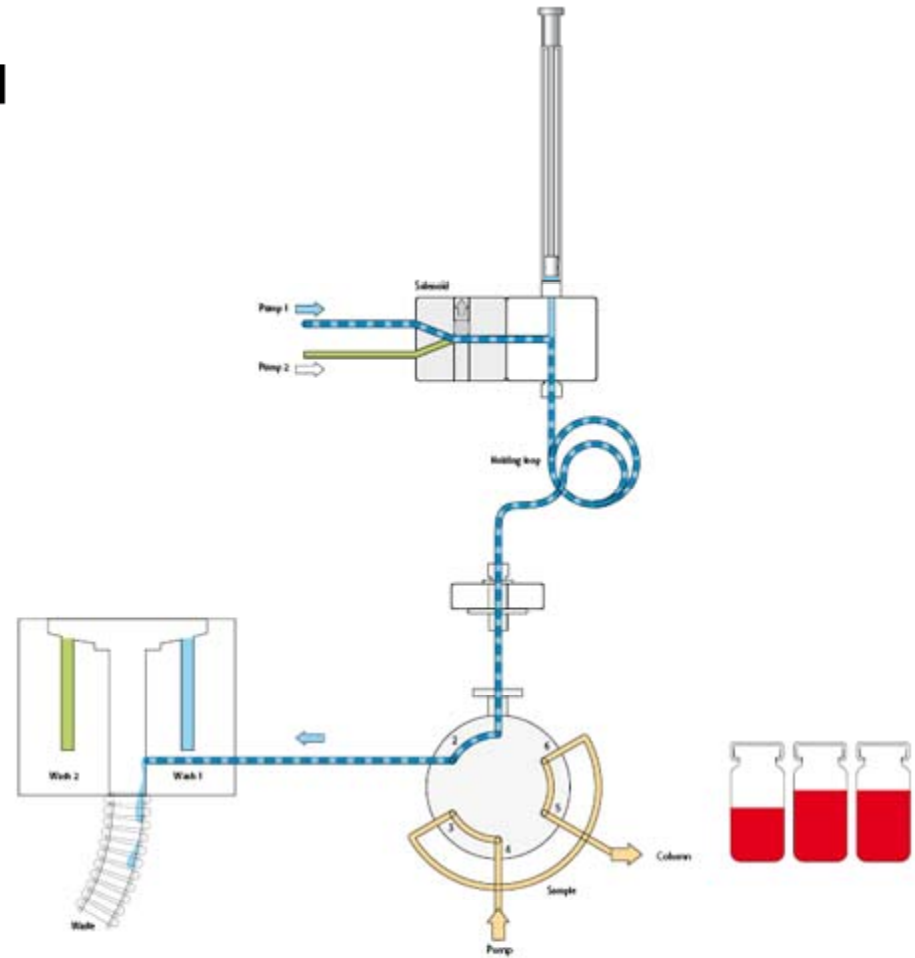
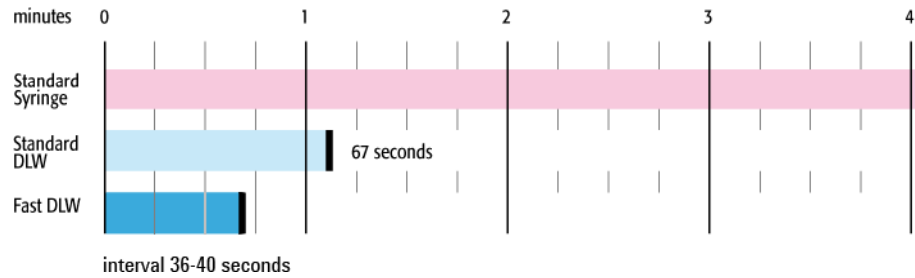
Valve clean with wash liquid 2



Fast Dynamic Load & Wash: Step 13-14



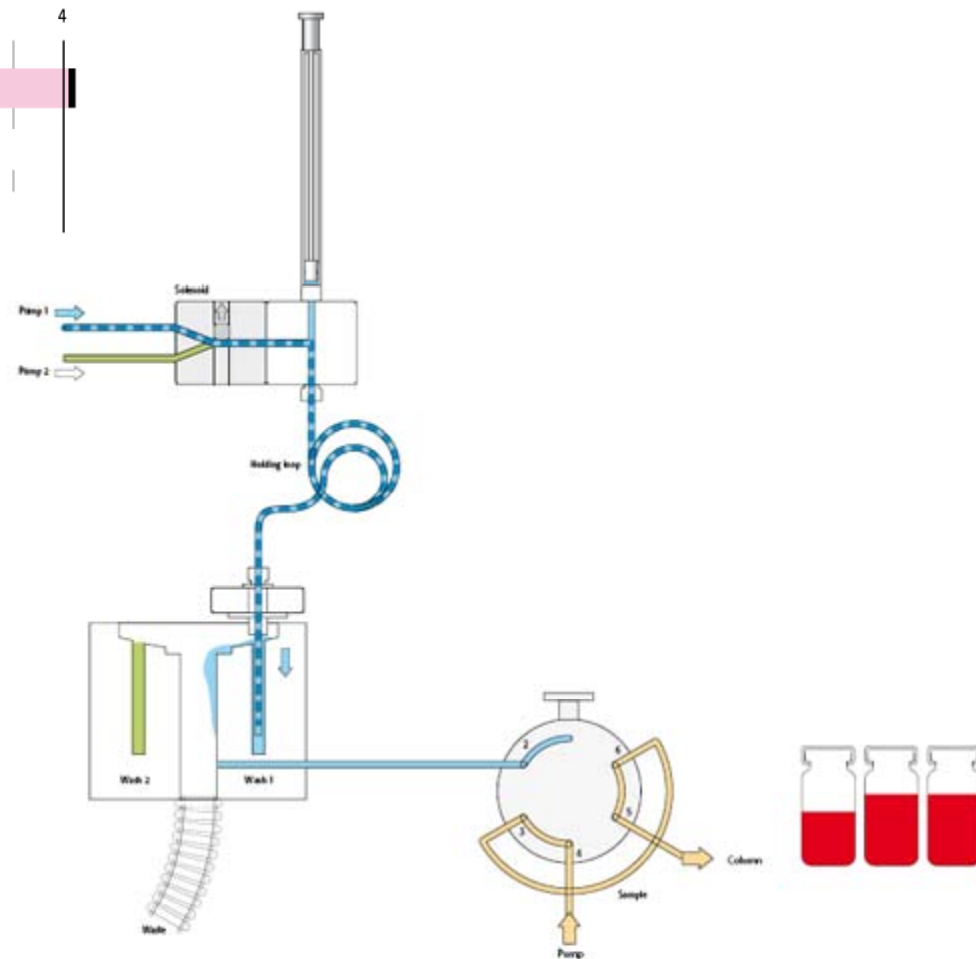
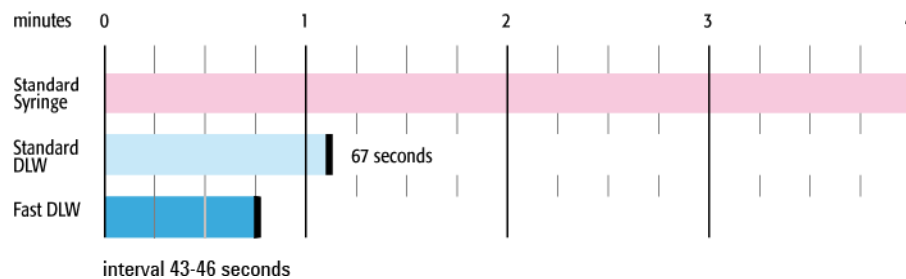
Valve clean with wash liquid 1



Fast Dynamic Load & Wash: Step 15



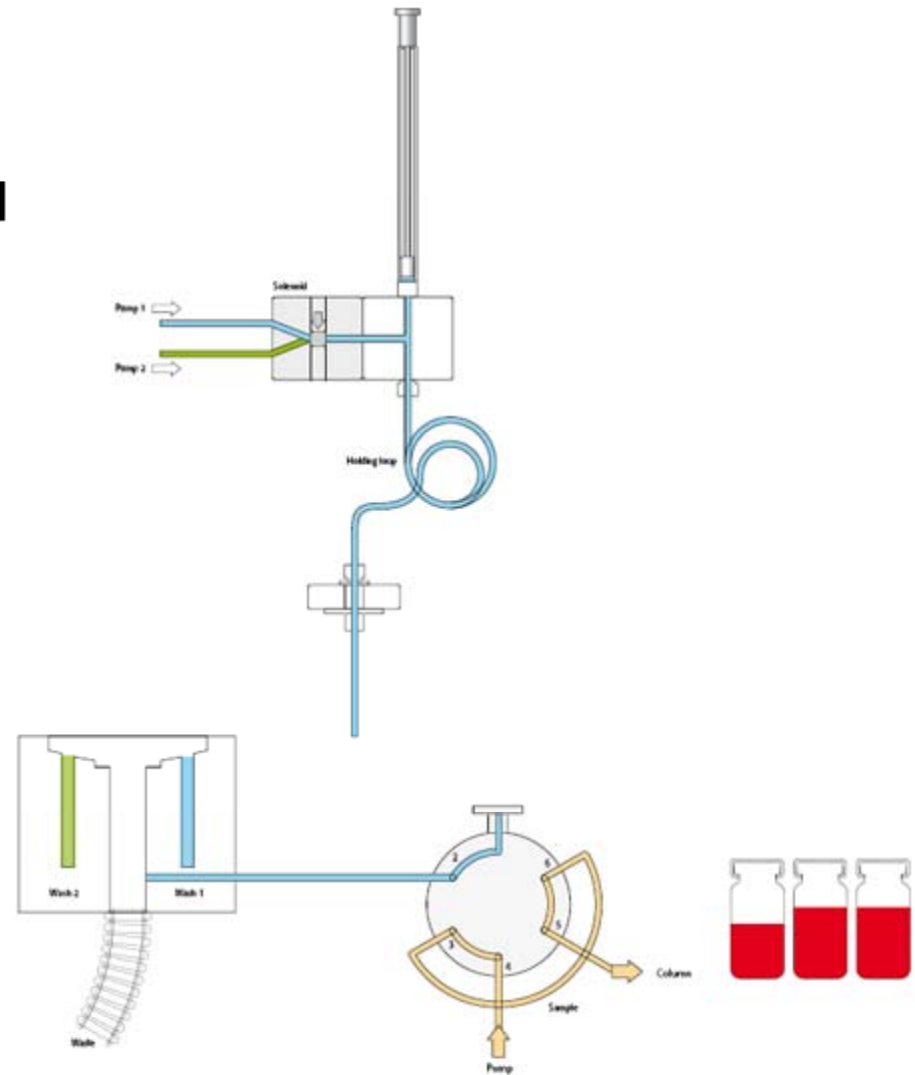
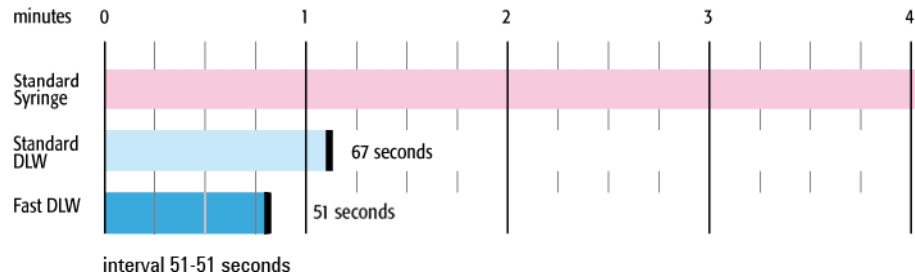
Active needle wash with wash liquid 1



Fast Dynamic Load & Wash: Step 16

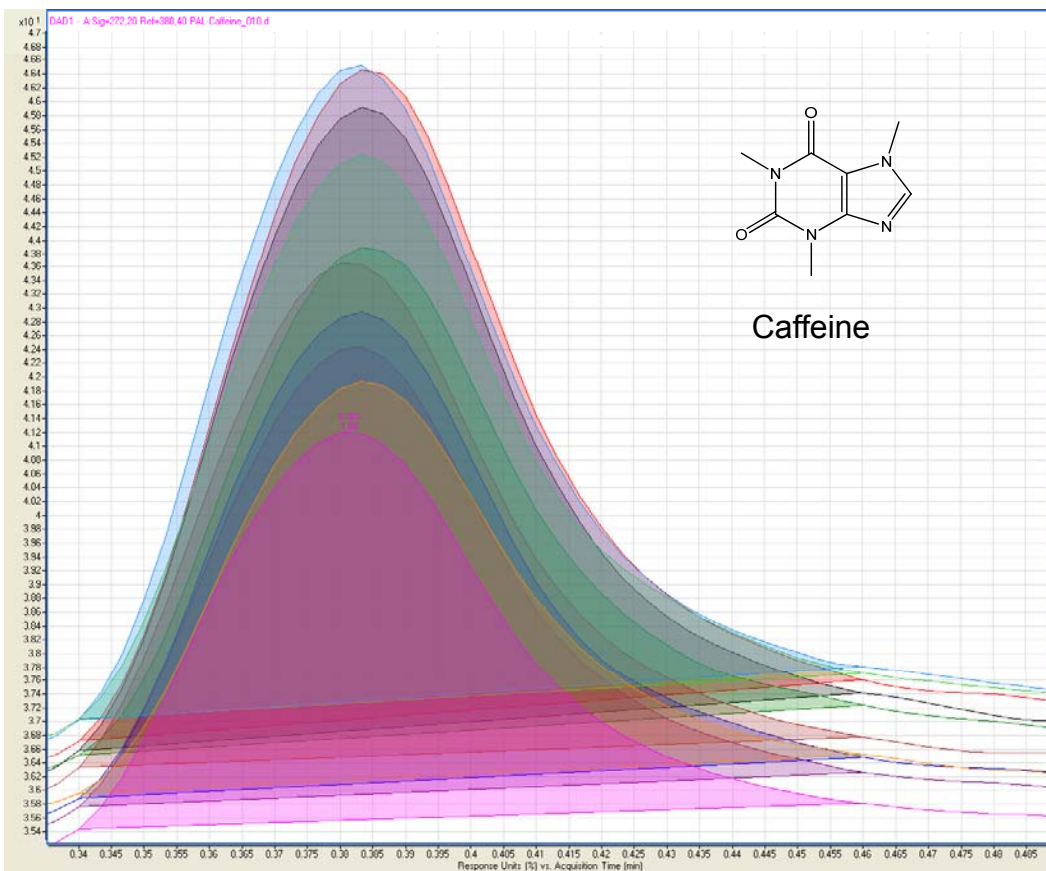


Cycle ends





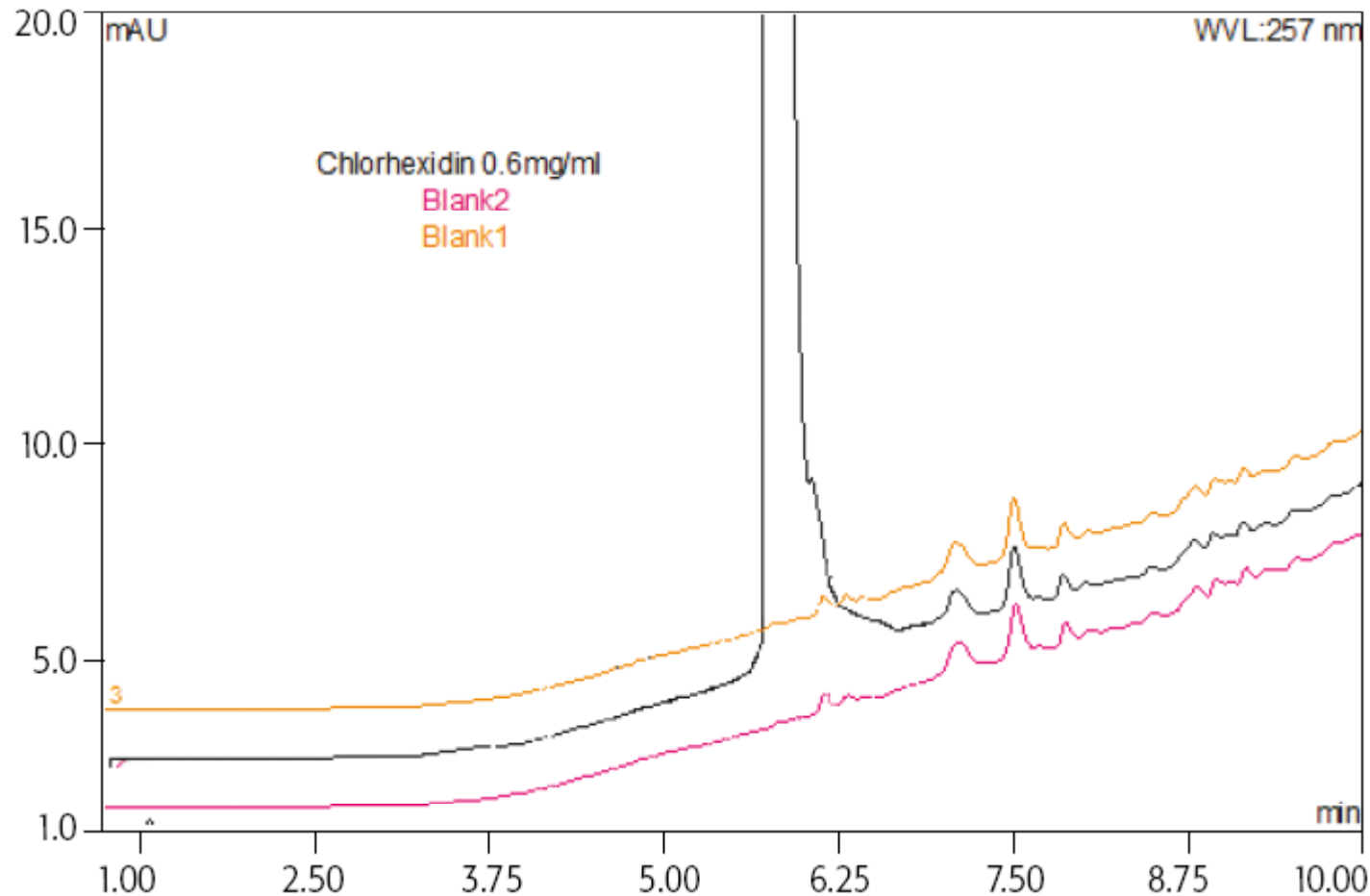
UV-272 Reproducibility, Modified DLW Inj. Cycle



| Injection# | Caffeine 272 nm | Caffeine RT |
|-------------|--------------------|----------------|
| 1.0 | 1.68 | 0.384 |
| 2.0 | 1.72 | 0.384 |
| 3.0 | 1.69 | 0.384 |
| 4.0 | 1.69 | 0.383 |
| 5.0 | 1.68 | 0.382 |
| 6.0 | 1.67 | 0.382 |
| 7.0 | 1.7 | 0.383 |
| 8.0 | 1.69 | 0.383 |
| 9.0 | 1.68 | 0.384 |
| 10.0 | 1.66 | 0.381 |
| Average | 1.7 | 0.383 |
| RSD | 0.016 | 0.001 |
| %RSD | 0.98% | 0.28% |

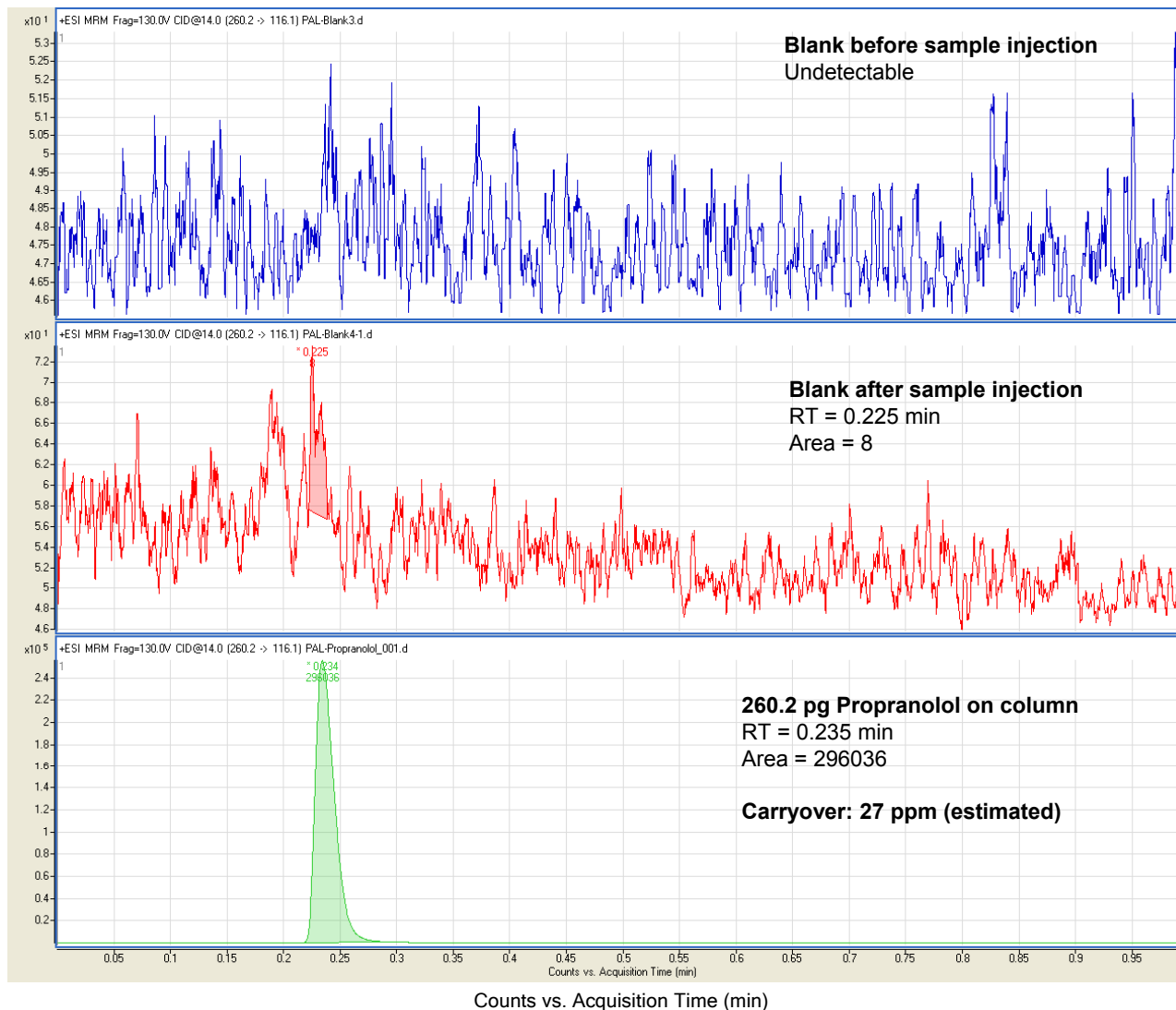
- Acquired using 2 μ L fixed loop injection with modified DLW injection cycle.
- No discernable caffeine peak in pre-run or post-run blanks.
- Abundance reproducibility comparable to Agilent 1200 series autosamplers.

Carryover Test UV



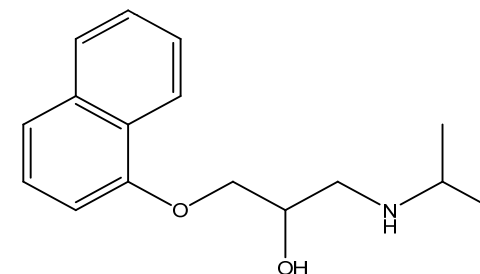
Injection of 1200 ng Chlorhexidine on column; followed by 2 blank injections using the new DLW option. Less than 0.003% (30ppm) of carryover could be detected.

Carryover, 1.0 μM (+/-) Propranolol (260.2 pg on column) (+MRM: 260.2 \rightarrow 116.1)



Dwell time = 20 ms
Interchannel delay = 3.5 ms
Cycle time = 50 ms

Flow rate = 0.8 mL/min



1290 Infinity Sample Injection Choices



1290 Infinity Autosampler (G4226A)



- Up to 2 well plates cooled
- 40 ppm or 0.004% typical carryover
- Injection volume 40 μ L and up to 100 μ L possible*

1290 Infinity LC Injector HTC (G4278A)



- 50 cm wide
- Up to 12 well plates cooled
- ~40 ppm or 0.004% typical carryover
- Injection volume up to 100 μ L with DLW, and up to 5 mL** with Active or Fast wash

1290 Infinity LC Injector HTS (G4277A)



- 80 cm wide
- Up to 24 well plates cooled
- ~40 ppm or 0.004% typical carryover
- Injection volume up to 100 μ L with DLW, and up to 5 mL** with Active or Fast wash

* March 2010

** Separate HW required

Product Detail and Ordering Information



| Description | Product Number |
|---|----------------|
| Systems | |
| Agilent 1290 Infinity LC Injector HTS Provides capacity for up to 24 well plates with cooling. Offers the dynamic load and wash principle with 100 µL syringe, 2 µL loop, proprietary 1200 bar valve, and driver (ICC). Width HTS: 80 cm. Must select at least one item from sample stack/tray holder section when ordering a system. Larger sample loops can be ordered separately. | G4277A |
| Agilent 1290 Infinity LC Injector HTC Provides capacity for up to 12 well plates with cooling or up to 24 well plates without cooling. Offers the dynamic load and wash principle with 100 µL syringe, 2 µL loop, proprietary 1200 bar valve, and driver (ICC). Width HTC: 50 cm. Must select at least one item from sample stack/tray holder section when ordering a system. Larger sampler loops can be ordered separately. | G4278A |

| Description | Product Number | Ordering Option# |
|--|----------------|------------------|
| Stand-alone sample stacks and tray holder | | |
| Agilent PAL Stack 12 MTP | G4270-60001 | 001 |
| Agilent PAL Stack 6 DW | G4270-60002 | 002 |
| Agilent PAL Stack 12 MTP cooled | G4270-60003 | 003 |
| Agilent PAL Stack 6 DW cooled | G4270-60004 | 004 |
| Agilent tray holder for 4 well plates | G4277-60005 | 005 |

Product Detail and Ordering Information



| Description | Product Number | Pressure Rating |
|--|----------------|-----------------|
| Additional sample loops | | |
| 2 μ L Loop (SST, Special Label, included in order) | 5068-0031 | 1200 bar |
| 5 μ L Loop (SST, Special Label) | 5068-0032 | 1000 bar |
| 20 μ L Loop (SST, Special Label) | 5068-0033 | 1000 bar |
| 50 μ L Loop (SST, Special Label) | 5068-0034 | 600 bar |
| 100 μ L Loop (SST, Special Label) | 5068-0035 | 600 bar |